

In the claims:

Claim 1 (currently amended) A stack consisting of a filter-press modular arrangement comprising a multiplicity of single proton exchange membrane fuel cells and of cooling devices, each cell being delimited by a pair of metal bipolar plates and comprising ion-exchange membranes and perimetrical sealing gaskets shaped as frames suitable for housing current collectors within their hollow central part, the bipolar plates and the gaskets being provided with passage openings comprising holes for feeding the reactant gases, for extracting the residual gases with the reaction products, for injecting and discharging a thermostating fluid, ~~characterised in that~~ the lateral migration of ions proceeding from said thermostating fluid inside said ion-exchange membranes is prevented.

Claim 2 (currently amended) The stack of claim 1 ~~characterised in that~~ wherein the bipolar plate closest to the negative terminal is free of passage openings.

Claim 3 (currently amended) The stack of claim 1 ~~characterised in that~~ wherein said lateral migration of ions is prevented by means of a physical isolation of the ion-exchange membranes from the thermostating fluid.

Claim 4 (currently amended) The stack of claim 1 ~~of any one of claims~~ claim 1 wherein the construction material of the metal bipolar plates is stainless steel containing 16-26% chromium, 10-22% nickel, and optionally molybdenum.

Claim 5 (currently amended) The stack of claim 4 ~~characterised in that~~
wherein said stainless steel is selected between AISI 316L and the steels of the CrNi
2520 series according to DIN.

Claim 6 (currently amended) The stack of ~~any one of the previous claims~~
claim 1 ~~characterised in that~~ wherein the thermostating fluid is demineralised water
circulating in a close circuit.

Claim 7 (currently amended) The stack of ~~any one of the previous claims~~
claim 1 ~~characterised in that~~ wherein the perimeter of the ion-exchange membranes is
located in an intermediate region of the perimetrical sealing gaskets comprised between
the edge of the central hollow portion and the circumference of the passage openings.

Claim 8 (currently amended) The stack of claim 7 ~~characterised in that~~
wherein the ion-exchange membranes are isolated from the thermostating fluid by means
of sealing elements located in said intermediate region, optionally comprising ridges or
rings.

Claim 9 (currently amended) The stack of ~~any one of the previous claims~~
claim 1 ~~characterised in that~~ wherein the ion-exchange membranes are provided with
passage holes matching the passage openings of the gaskets and having a greater section
than said openings, which are isolated from the thermostating fluid by means of sealing
elements located between the edges of said passage holes of the membranes and the

passage openings of the gaskets optionally comprising ridges or rings of non conductive material in form of planar gaskets or O-rings.

Claim 10 (currently amended) The stack of claim 9 ~~characterised in that~~
wherein said rings of non conductive material are made of low hardness rubbers,
optionally EPM or EPDM.

Claim 11 (currently amended) The stack of claim 9 ~~characterised in that~~
wherein said rings of non conductive material consist of a liquid film applied at the
moment of assembling the stack and polymerised with a catalyst contained in the liquid
film, or by UV irradiation or thermal treatment.

Claim 12 (currently amended) The stack of claim 11 ~~characterised in that~~
wherein said film is provided with elasticity and reduced hardness after polymerisation.

Claim 13 (currently amended) The stack of ~~any one of claims 11 or~~
claim 12 ~~characterised in that~~ wherein said liquid film consists of a silicon resin-based
polymerisable material.

Cancel **Claim 14**.